VILLOUS DISEASE,

(PAPILLARY FIBROMA)

OF

THE BLADDER,

AND ITS

SURGICAL TREATMENT.

BY

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REDRUTH, CORNWALL.

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THE case on which this paper is based may be considered worth recording on several grounds—its long duration, probable cure by injections, recurrence of disease, and *post mortem* appearance, which plainly showed that the growths might readily have been removed by surgical interference.

Villous disease of the bladder is a rare affection. Dr. Goodhart, of Guys, has told me that it is not infrequently seen in the *post mortem* theatre, but the experience of most surgeons points to its being rarely diagnosed during life.[a] Although called by the term "villous cancer," there is nothing of a malignant character attaching to the growths; they are extremely vascular, and consist of mere loops of blood-vessels covered by epithelium, which in no case grows *within* the delicate framework of connective tissue.

I propose to abridge the voluminous notes which were taken during the patient's prolonged illness, by arranging the prominent points under certain heads.

CASE.—*Family History.*—Three brothers and his father died of obscure vesical or prostatic disease, said to be "cancer" in the case of two. I wrote to the medical attendant of one, but he could not give me any definite information.

Personal History.—Always enjoyed good health until 1867, when he observed his urine to be discoloured, and he required to get out of bed at night to relieve his bladder. He was then fifty-four years of age, and

[a] Mr. Birkett (Med. Chir. Trans., Vol. XLI.) tabulates ten cases, being all on record up to the date of his paper, March, 1858, and including Warner's, A.D. 1737.

consulted my predecessor, the late Thomas Michell, M.D., Lond. During Dr. Michell's attendance there was complete obstruction to the flow of urine. A consultation was held; the bladder was found to be distended with blood clot, which was broken down with a catheter, and removed by the help of Clover's syringe. So far as I could make out, after the lapse of time, cystitis supervened, and blood used to come away in the urine in large quantity. Dr. Michell believed the bladder to be ulcerated, and he continued to inject a solution of nitrate of silver at intervals for several weeks. The patient remembered the particulars very distinctly, as the pain of injection was so great as to require his being placed under the influence of chloroform on each occasion. At any rate he was completely cured, returned to his occupation as a respectable tradesman, and continued in good health for nearly eight years. He looked upon himself as a marvellous recovery; and previous to his late illness, which I interpret as a recurrence of the disease, I was inclined to believe he exaggerated (as old soldiers are reputed to do) his former danger.

In January, 1875, he first consulted me, and said that his former attacks began in the same way. At intervals of three or four days, blood would appear in the urine, and for many months I could not make up my mind as to the cause.

Diagnosis.—His age, the family history, abundant hæmorrhage, and emaciation pointed to "malignant disease," and microscopic examination of the sediment, with its suspicious-looking cells, favoured that view; but the long duration, absence of lymphatic deposit, or enlargement of neighbouring organs, and finally detection of pieces of villous structure in the urine, confirmed me in a correct diagnosis. For a long time I suspected "stone;" but the patient, having missed the omnibus one evening at Falmouth, was compelled to walk home nine miles, yet neither that day nor for three days afterwards did any appreciable amount of blood appear, which in the case of "stone" must surely have been aggravated. He had such a dread of catheterism that I could not get him to consent to the introduction of a sound, except when under the influence of chloroform; and as he had dilated heart, with well-marked *arcus senilis*, I did not consider myself justified in using an anæsthetic, unless some more serious symptoms should be presented. Pain and frequency of micturition were his most prominent causes of complaint—the pain preceded and followed micturition—both were relieved by morphia suppositories; but as the disease advanced, and the ureters became enlarged, the pain assumed a deeper, heavier character, extended to the loins, from the hypogastric to the lumbar regions of the abdomen and the back. Clots of blood were rarely seen in the urine; at no period when floated out did they present the worm-like coils indicative of coagulation in the ureter, but were irregular and flattened, as if formed in the bladder. Blood seemed to be present without any known exciting

cause. Sometimes for days the urine would be quite free from any tinge, and one was hoping that the astringent medicines were doing good; and on another occasion, with precisely the same treatment, the urine would be so charged with it as to resemble raw meat juice more than anything else.

Careful and repeated examination on Sir H. Thompson's method—viz., by having the sample of urine divided into two portions, one representing the flushing of the urethra and the washing out of the canal with its epithelial *debris*, and the second portion the fluid as it exists in the bladder—satisfied me that the hæmorrhage was vesical in its origin, and neither from the kidney nor ureter; but until the passage of pieces of villous tumour, which settled the diagnosis, I must confess the microscope was more a hindrance than a help—and no wonder, when we remember the various forms of epithelium which may be developed on the ulcerating surface of a new growth on a mucous membrane. "Prostatic disease" was also suspected, but this was negatived by rectal examination, which showed that the prostate was not enlarged, and that behind it the bladder was contracted with thickened walls, but containing within it some soft, yielding contents, of a doughy character. The emaciation was not at any time that of the cancerous cachexia. For more than eighteen months his appetite remained good, even when the hæmorrhage was most constant, and, although anæmic, no wasting occurred. When the appetite failed, and sources of bodily heat lessened, he confined himself mainly to his room, became still more anæmic, and, with the aid of morphia, passed a tolerable existence.

Termination.—For three months previous to death the hæmorrhage had entirely ceased, portions of phosphatic deposit were occasionally voided, appetite was fair, a suppository only required every third night, and, to all appearance, he was gradually improving. In April, 1878, on attempting to get into bed after relieving the bladder, he fainted and fell. His son, who had only been out of the room two minutes, heard the fall, rushed up-stairs, sent for me, and as I happened to be passing on the streets, a few yards from the house at the time, I quickly arrived; the pulse had ceased to beat, and all was over in a few seconds from fatal syncope, probably connected with the diseased heart.

Autopsy.—Owing to the family history, an examination was readily granted. I have had a sketch of the bladder, with its tumours, lithographed, half original size. It will be seen that there are eight tumours, each connected by a narrow pedicle which might be ligatured, avulsed, or treated with the ecraseur. The large tumour at the fundus has been reflected, so as to show more distinctly the pedicle from which it springs. All were coated with a thick layer of phosphatic deposit like brownish mortar. When this layer was removed, and a portion of the tumour floated out in water, its true character was seen—delicate lace-like

growths springing from a firm, fleshy pedicle. To the right will be seen the enlarged projecting bundles of an hypertrophied bladder, not unlike the *columnæ carneæ* of the ventricles of the heart. The openings of the ureters may be seen, but the ureters themselves, owing to the obstructed flow of urine, were dilated to the size of an œsophagus.

The innocent character of the growths may be learned from the microscopic drawings. Fig. 2 represents a portion of a tumour under an inch object glass; Fig. 3, a portion of the same under a quarter of an inch object glass. The thin walled capillary vessels, of irregular diameter, may be seen coursing through the growth—the whole surface being covered with a columnar or polygonal epithelium. This epithelium is, however, *on* the surface, *homologous*, not *within* the subjacent connective tissue, *heterologous*, which is characteristic of epitheliomatous growths.

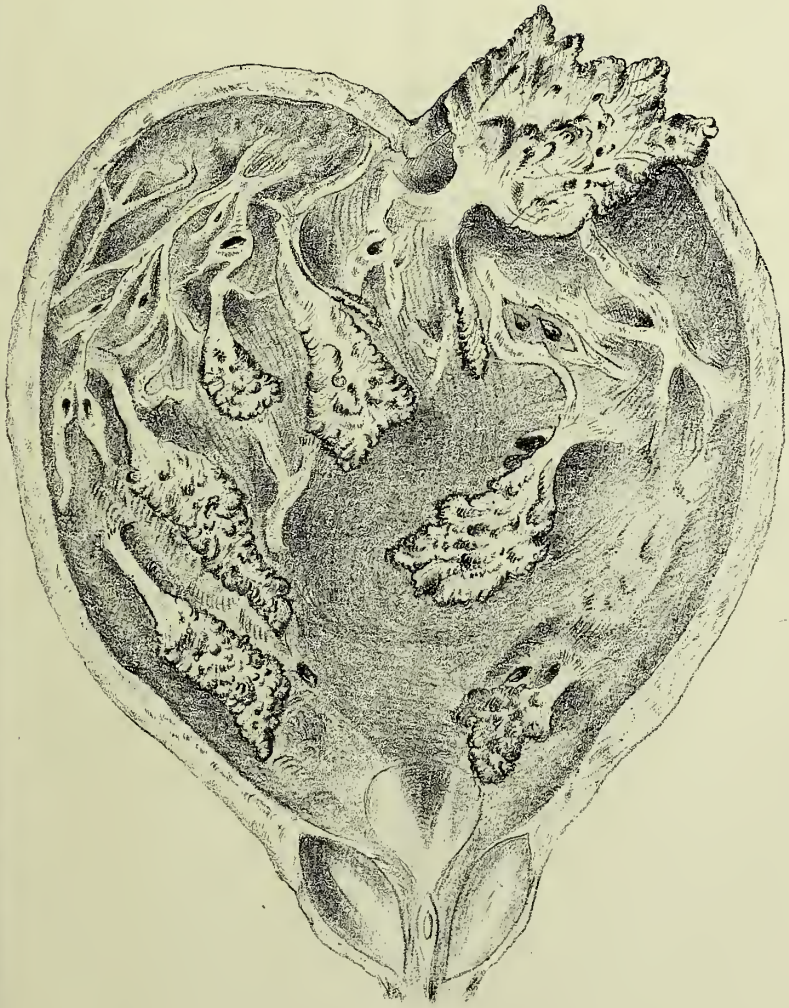
"Villous" is the term by which these growths are best known, but it is, perhaps, better to adopt the more recent name—papillary fibroma—which at once gives the clue to their structure and clinical character.

Treatment.—The consensus of opinion which pervades all English authorities within my reach as to the merely palliative treatment of this affection is remarkable, when we read that these growths have been frequently removed in the female with success. I cannot but think that it arises from the term "villous *cancer*," a misnomer which is still retained in some of the text-books. My sole object in publishing this case is to show the feasibility of operative interference when the diagnosis is certain and the general symptoms favourable.

Bryant says: "There is no cure for this affection—the surgeon can only relieve symptoms."[a] Sir H. Thompson, in his Lectures,[b] and in the article in Holmes' Surgery, confines himself to instructing us how to combat the prominent symptoms of pain, hæmorrhage, and frequent micturition. Coulson says: "By way of treatment, all we can do is to allay pain and irritation by the use of sedatives,"[c] but, further on, after quoting in detail the case of Crosse, of Norwich, he mentions that Mr. Warner removed successfully, by ligature, a tumour growing from inside the bladder. Fleming,[d] Druitt, and Spence do not refer to it. Erichsen, it is

[a] Practice of Surgery. 1st Ed. P. 505.
[b] Diseases of the Urinary Organs. 4th Ed.
[c] Diseases of the Bladder. 4th Ed. P. 209.
[d] Clinical Records on Diseases of the Gen. Urin. Organs.

Fig. 1.



LAKE & LAKE, LITH. TRURO.

true, mentions Warner's and Civiale's cases, but the whole subject is dismissed in a few lines. As I had only these authorities to consult, I treated my patient with various astringents for the hæmorrhage, and administered sedatives for the pain and frequent micturition. I do not think that any of the astringents were of real service; sometimes I fancied they were, but each failed at times; and, looking at the tumours and their delicate processes—liable to be torn or squeezed at any time by the contraction of an hypertrophied bladder—I cannot see how any medicine administered by the mouth can produce much local astringent effect on these growths in any hollow viscus such as the bladder. The medicines employed for the hæmorrhage were—Gallic and sulphuric acids, acetate of lead, liquor of the pernitrate of iron, turpentine, ergot (liquid extract of the U. S. Pharm.), and tincture of hamamelis. Hypodermic injections of Morson's ergotine were also tried. For the next indication—the relief of pain and spasm—nothing suited so well as half-grain morphia suppositories. Ten minutes after the introduction of one, all pain and spasm would disappear, and when used at bed-time, he did not require to empty the bladder for several hours, thus ensuring sleep.

Over and over again I thought of the possibility of operative interference by removing the growths after incising the bladder through the perinæum; but it was only last August, when attending the Bath meeting of the British Medical Association, that I saw in the daily journal that Professor Humphry, of Cambridge, had successfully removed a growth from the male bladder.[a] Later on I read in *The Lancet* the most interesting communication of Dr. William Alexander, of Liverpool, detailing a case of villous growths in the female bladder, which were removed partly by polypus snare and partly by scraping after dilatation of the urethra. Although she had been suffering from so-called chronic cystitis for nine years, the relief was so great that she was able to transfer herself from the wards of a workhouse to be cook in a large family, and earn her own living.[b] Later on still, I came across Gross's "Diseases of the Urinary Organs," and there I found not only the fullest account of the disease in question, but also the confident statement that, "for the relief of papillary and polypoid fibromas, surgical interference is imperatively demanded, since without it a fatal issue is almost the inevitable result. In male subjects the

[a] Brit. Med. Journal. Vol. II. 1878. P. 368.
[b] Lancet. Vol. II. 1878. P. 209.

only rational mode of attacking these growths is by opening the bladder and removing them, in accordance with the extent of their attachments, by enucleation, avulsion, scraping, ecraseur, or ligation. In females, on the other hand, cystotomy is uncalled for, since, on account of the greater shortness and dilatability of the urethra and the absence of the prostate, access to the tumour is rendered easy and attended with less risk."

Dr. Gross presents the statistics of sixteen operations in a tabular form. The cases of Warner, Crosse, Birkett, and Hicks, are included. To these should be added those of Humphry, Alexander, and Lawson Tait,[a] and the summary will be as follows :—Fourteen females and five males. Of the adult females, all recovered except one—death in this case being from perforation of the bladder in attempts to tear off a sarcomatous tumour by forceps. Of the five males three recovered. In children, according to Dr. Gross, the operation holds out little prospect of relief, owing to the number of tumours rendering them inaccessible except by suprapubic incision.

In females the removal of these growths must be a comparatively easy operation, as, after rapid dilatation of the urethra, when the patient is anæsthetised, all parts of the bladder can be readily reached. I do not think that practitioners are generally aware of the curative results which very frequently follow rapid dilatation of the urethra in various diseases of the female bladder. It is easily done by a few large size gum elastic catheters or small vulcanite rectal bougies, or the dilator of Messrs. Weiss, or the hard rubber specula of Professor Simon, of Heidelberg, who has scraped off papillary fibromas in three cases, with recovery in each, although in one the bladder was nearly two-thirds filled with these growths. Mr. Teale's essay "On the Treatment of Vesical Irritability and Incontinence of Urine in the Female by Dilatation of the Neck of the Bladder,"[b] is so clear as to convince the most sceptical, and lead him to aim at similarly satisfactory results, when treating a most distressing class of complaints.

Of the five males, one was Crosse's, of Norwich. A child two years of age had suffered for six months, and although after repeated examinations no stone was satisfactorily felt, Mr. Crosse thought one might be encysted at the termination of the left ureter, and as the child was evidently sinking, he determined to attempt an operation for his relief. After cutting down to the

[a] Diseases of Women. P. 81.
[b] Lancet. Vol. I. 1876. P. 84.

staff, and opening the membranous portion of the urethra, soft tumours protruded from the wound; in appearance they resembled several coils of small intestine. A large quantity was removed, but much of the diseased structure was left behind, and the little patient died after forty-four hours' incessant suffering.

The second case was a man, aged forty-nine years, operated on by Gersuny, quoted by Dr. Gross from Langenbeck's Archives, 1872; but in it the growth was not reached, and the patient died.

The third was one which coexisted with stone, and was avulsed by Desault. Recovery followed.

The fourth was Billroth's celebrated case.[a] Patient discharged from hospital on thirty-second day, wearing a truss to prevent hernial protrusion from suprapubic cicatrix. Billroth first verified his diagnosis by cystotomy in the perinæum; then, in order to have plenty of room, he divided the recti muscles at their insertions, and incised the bladder transversely. After removal of the growths a drainage-tube was allowed to pass through the organ, and hang out of the lower opening.

The fifth case was the one of Prof. Humphry, already referred to. A young man in Addenbrooke's Hospital had suffered from frequent micturition, agonising pain, straining, &c., with discharge of bloody urine. An incision, as for lithotomy, was made into the bladder. A pedunculated ragged mass of the size of an orange was torn through with the finger, and its root scraped with the finger-nail. He quite recovered, and six months afterwards was well.

Even if it were found, after performing cystotomy, that the tumours could not be removed with safety, the operation would, in most cases, benefit the patient, as ready exit would be given to mucus or other deposit, and all the agonising pain and strain which accompany an hypertrophied bladder would thereby be lessened. In America cystotomy seems to be a recognised operation for various chronic diseases affecting the male bladder, just as rapid dilatation of the urethra is considered curative in certain chronic diseases of the same organ in females.

To conclude—

1. Villous disease of the bladder is not so rare as is generally supposed—many so-called cases of chronic cystitis being probably due to it.

[a] Brit. Med. Jour. Vol. II. 1875. P. 493.

2. Its diagnosis is most difficult, and can only be arrived at after long observation, and by a process of exclusion.

3. Urinary deposits containing so-called cancer cells are very misleading, but the microscope is most valuable in detecting small portions of genuine villous growth.

4. There should be no difficulty in detecting the growths in the female, as the whole internal surface of the female bladder can be readily explored with the finger after rapid dilatation of the urethra, when under the influence of an anæsthetic.

5. Astringent injections are likely to be of use in the early stages, and before the growths have become pedunculated.

6. The surgeon, while unsparing in the use of sedatives to relieve pain and spasm, should bear in mind the possibility of permanent cure by removal of the growth.

7. Statistics show that the operation is neither difficult nor dangerous in the female; and there are good grounds for believing that when preceded by cystotomy in the adult male it will prove justifiable and satisfactory.